

WHAT IS CLAIMED IS:

1. A semiconductor device manufacturing method, comprising the steps of:

measuring an ion current density distribution in a plasma processing apparatus, and

ascertaining whether or not said measured distribution is in compliance with an ion current density distribution that becomes a criterion.

2. A semiconductor device manufacturing method, comprising the steps of:

exposing a wafer to a plasma, said wafer including a semiconductor or a conductor, an insulator formed on said semiconductor or said conductor and having a region in which a thickness has been made locally thin, and a second conductor provided on said insulator, one of said semiconductor or said conductor and said second conductor having a second region, a solid angle formed from a surface of which is made smaller than a solid angle formed from a surface of a first region,

measuring an ion current density of said plasma, and

manufacturing said semiconductor device based on said measured ion current density.

3. A semiconductor device according to claim 2, wherein said first region is provided in said semiconductor or conductor.

4. A semiconductor device manufacturing method, comprising the steps of:

forming, on a wafer, a first region into which an ion and an electron are launched and a second region into which said ion is launched but said electron is not launched,

exposing said wafer to a plasma,

measuring an ion current density of said plasma by utilizing said first region and said second region, and

manufacturing said semiconductor device based on said measured ion current density.